

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOC D HOBBS OGD
Hobbs
JUN 26 2017
RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Zones ☐ Hydraulic Fracturing
Other: _____

2. Name of Operator
ENDURANCE RESOURCES LLC

3. Address 203 WEST WALL, SUITE 1000, MIDLAND, TX 79701 3a. Phone No. (Include area code) 432-242-4680

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
2440' FNL & 2280' FEL
At surface
At top prod. interval reported below
At total depth 330' FNL & 2320' FEL

5. Lease Serial No. NMNM 115000 117126
6. If Indian, Allottee or Tribe Name
7. Unit or CA Agreement Name and No. NM-136909
8. Lease Name and Well No. TALCO 9 26 35 FED 3H
9. API Well No. 30-025-43458 0051
10. Field and Pool or Exploratory WOLFCAMP
11. Sec., T., R., M., on Block and Survey or Area SEC 9 T26S R36E
12. County or Parish LEA COUNTY 13. State NM
14. Date Spudded 10/27/2016 15. Date T.D. Reached 12/15/2016 16. Date Completed 02-24-2017 ☐ D & A ☒ Ready to Prod.
17. Elevations (DF, RKB, RT, GL)* 3174' GL
18. Total Depth: MD 19222 12607 19. Plug Back T.D.: MD 19672 12600 20. Depth Bridge Plug Set: MD TVD
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) QUAD COMBO 22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☒ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
14-3/4"	10-3/4" J-55	40.5	0'	1155'		800 / CLASS C	218	0'	68 BBLS / 230 SXS
9-7/8"	7-5/8" P110	29.7	0'	11585'	5294'	1487 / CLASS H	688	1000'	0 BBLS
6-3/4"	5" HCP110	18	0'	19722'		1125 / CLASS H	503	0'	24 BBLS

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WOLFCAMP	12482'	13030'	WOLFCAMP	0.42"	2664	OPEN
B)	13408'	19643'				
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Post hydraulic fracturing chemical disclosures on FracFocus.org

Depth Interval	Amount, Type of Material and Date of Chemical Disclosure upload on FracFocus.org
19643'-13408'	464,638 bbls FW, 19,743,950# proppant, Acid 140,639 gal 15% HCl

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
2/24/17	3/10/17	24	→	1081	1058	2686	44.0	.8302	FLOW
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
28/64	SI	2200	→	1081	1058	2686	979	POW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
	SI		→						

ACCEPTED FOR RECORD

DAVID R. GLASS
MAY 24 2017

DAVID R. GLASS

PETROLEUM ENGINEER

*(See instructions and spaces for additional data on page 2)

RECLAMATION DUE:
AUG 24 2017

K-2

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API.	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Solid, used for fuel, vented, etc.)

SOLD TO TARGA

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

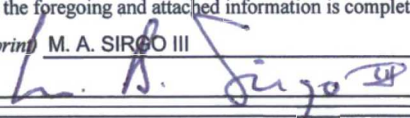
Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
Red Bed	0	1000	Redbed	Rustler Lamar	1000 5332
Rustler	1000	1678	Anhydrite	Bell Canyon Cherry Canyon	5360 6300
Top Salt	1678	2942	Salt	Brushy Canyon Bone Spring	7770 9234
Bottom Salt	2942	5332	Salt	1st Bone Spring 2nd Bone Spring	10457 10597
Delaware Bone Spring	5332 9234	9234 11449	Sand/shale/limestone Sand/shale/limestone	3rd Bone Spring	11449
Wolfcamp	11449	12462	Shale	Wolfcamp	12462

32. Additional remarks (include plugging procedure).

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☒ Directional Survey
☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☒ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) M. A. SIRGO IIITitle VP OPERATIONSSignature Date 03/16/2017

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

(Form 3160-4, page 2)

WELL: Talco 9 26 35 Federal #3H

LOCATION: 2440' FNL & 2280' FEL 26S – 35E – Sec. 9 Lea County, New Mexico

API NO: 30-025-43458

1/23/2017

PERF STAGE 1 - 1ST SHOT FIRED W/ 3640 PSI. REMAINING SHOTS FIRED IN 6 MIN INCREMENTS – SHOTS @ 19,643', 19,614', 19,585', 19,556', 19,527', 19,498' - ALL SHOTS 6 SPF, 12 SHOTS PER SETTING, 0.42" EHD, 60* PHASING.

FRAC STAGE 1 - BREAK 8096 PSI @ 3.9 BPM - SPOT 3526 GAL 15% HCL - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 520,020# - STARTED 7 VIS LINEAR GEL ON FLUSH LLTR=13,007 BBL - AR=46.6 BPM - AP=10,464 - ISIP=5838 PSI - FG=0.90 - 5 MIN=5585 PSI

1/24/2017

PERF STAGE 2 - SET PLUG @19,484' - PUH TO NEXT SETTING TEST PLUG 8763 PSI - HELD - SHOOT 19,469', 19,440', 19,411', 19,382', 19,353', 19,324' - PRESS DROP TO 6135 PSI – POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL WHP 5320 PSI

FRAC STAGE 2 -BREAK 8200 PSI @ 5 BPM - SPOT 2000 GAL 15% HCL - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5 PPG TO 2.0 ppg - TOTAL SAND PUMPED 520,580# - STARTED 7 VIS LINEAR GEL ON FLUSH LLTR=13,962 BBL - AR=66.7 BPM - AP=10,030 - ISIP=6097 PSI - FG=0.92 - 5 MIN=5676 PSI OPEN WHP 5420

1/25/2017

PERF STAGE 3 - RIH PLUG & GUNS STAGE 3- PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @19,286' – PUH SHOOT 19,272', 19,266', 19,237', 19,206', 19,179', 19,150, - POOH ALL SHOTS FIRED - ALL SHOTS 0.42", 60*, 6 SPF, 12 PER SETTING, 72 TOTAL.

FRAC STAGE 3 - OWHP 5348 PSI - LEAD 2000 GAL 15% HCL - BREAK 9460 @ 13 BPM - PRESS DROP FROM 10,350 TO 7300 - SHUT DOWN. ISIP 5545 - .87 FG - FLUSH WELL W/ LINEAR GEL - SHUT DOWN - ISIP 6017 - .91 FG

PERF STAGE 4 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 19,130' - PUH TO PERF SETTING TEST PLUG 7953 PSI - HELD - SHOOT 19,120', 19,092', 19,063', 19,034', 19,007', 18,976' - PRESS DROP TO 5667 PSI – POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 4 - OWHP 5538 PSI - LEAD 2100 GAL 15% HCL - BREAK 7718 PSI @ 8 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 523,460# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=14,591 BBL - AR=42 BPM AP=9,778 - ISIP=6050 PSI - FG=0.91 - 5 MIN=5679 PSI

PERF STAGE 5 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,958' - PUH TO PERF SETTING TEST PLUG 7956 PSI - HELD - SHOOT 18,945', 18,914', 18,889', 18,860', 18,827', 18,802' - PRESS DROP TO 5418 PSI – POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 5 - OWHP 5385 PSI - LEAD 1913 GAL 15% HCL - BREAK 6810 PSI @ 8.6 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 516,020# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,800 BBL - AR=68.5 BPM AP=10,196 - ISIP=6273 PSI - FG=0.93 - 5 MIN=5781 PSI

1/26/2017

PERF STAGE 6 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,788' - PUH TO PERF DEPTH TEST PLUG 8016 PSI - HELD - SHOOT 18,773', 18,742', 18,715', 18,686', 18,657', 18,628' - PRESS DROP TO 5420 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 6 - OWHP 5338 PSI - PUMP 2100 GAL 15% HCL - BREAK 8044 PSI @ 5 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 513,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,966 BBL - AR=73.7 BPM AP=10,366 - ISIP=6207 PSI - FG=0.92 - 5 MIN=5831 PSI

2/2/2017

PERF STAGE 7 - SET PLUG AT 18,520' - TEST PLUG 7000 PSI - SHOOT 18,505', 18,485', 18,465', 18,445', 18,425', 18,405' - PRESS DROP TO 5928 PSI - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

2/3/2017

FRAC STAGE 7 - WHP 5673 PSI - PUMP 300 BBL PAD - PUMP 0.5 PPG 50 BBL SWEEP - STARTED RAMP - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 515,280# - FLUSH WITH 110 BBL 7 VIS LINEAR GEL & 220 BBL SLICK - LLTR=17,571 BBL - AR=71.5 BPM - AP=10,168 - ISIP=5962 PSI - FG=0.91 - 5 MIN=5659 PSI.

PERF STAGE 8 - RIH PLUG & GUNS - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,391' - PUH TO PERF SETTING - TEST PLUG TO 7472 PSI - HELD - SHOOT 18,376' - PRESS DROP TO 5380 PSI - PUH SHOOT 18,356', 18,336', 18,316', 18,303', 18,280' - WHP=5339 PSI - POOH - ALL SHOTS FIRED - SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL.

FRAC STAGE 8 - OWHP 5261 PSI - LEAD 2000 GAL 15% HCL - BREAK 6741 PSI @ 10.7 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 520,640# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=14,119 BBL - AR=70.1 BPM AP=10,295 PSI - ISIP=6155 PSI - FG=0.92 - 5 MIN=5733 PSI.

PERF STAGE 9 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,266' - PUH TO PERF SETTING TEST PLUG 7481 PSI - HELD - SHOOT 18,251', 18,222', 18,193', 18,164', 18,135', 18,106' - PRESS DROP TO 5672 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL.

2/4/2017

FRAC STAGE 9 - OWHP 5314 PSI - LEAD 2000 GAL 15% HCL - BREAK 7929 PSI @ 7.5 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 516,740# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,743 BBL - AR=69.0 BPM AP=10,234 PSI - ISIP=6167 PSI - FG=0.92 - 5 MIN=5820 PSI

PERF STAGE 10 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @18,092' - PUH TO PERF SETTING TEST PLUG 7645 PSI - HELD - SHOOT 18,077', 18,048', 18,019', 17,990', 17,961', 17,932' - PRESS DROP TO 5429 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 10 - OWHP 5339 PSI - LEAD 2000 GAL 15% HCL - BREAK 7484 PSI @ 10.7 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 514,900# - FLUSH WITH 7

VIS LINEAR GEL - LLTR=13,580 BBL - AR=70.6 BPM AP=10,217 PSI - ISIP=6159 PSI - FG=0.92 - 5 MIN=5765 PSI

PERF STAGE 11 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @17,918' - PUH TO PERF SETTING TEST PLUG 7519 PSI - HELD - SHOOT 17,903', 17,874', 17,845', 17,816', 17,787', 17,758' - PRESS DROP TO 5406 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 11 - OWHP 5340 PSI - LEAD 2000 GAL 15% HCL - BREAK 7766 PSI @ 15 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 522,800# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,426 BBL - AR=71.3 BPM AP=10,358 PSI - ISIP=6130 PSI - FG=0.92 - 5 MIN=5720 PSI

2/5/2017

PERF STAGE 12 - MU GUNS & PLUG SPOTTING 1500 GAL 15% HCL SET PLUG @17,742' - PUH TO PERF SETTING - TEST PLUG 7834 PSI - HELD - SHOOT 17,729', 17,700', 17,671', 17,642', 17,610', 17,584' - PRESS DROP TO 5324 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 12 - OWHP 5151 PSI - LEAD 2000 GAL 15% HCL - BREAK 7739 PSI @ 8.1 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.5# - TOTAL SAND PUMPED 516,080# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=13,841 BBL - AR=70 BPM AP=10,246 PSI - ISIP=6137 PSI - FG=0.92 - 5 MIN=5736 PSI

PERF STAGE 13 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 17,570' - PUH TO PERF SETTING TEST PLUG 7548 PSI - HELD - SHOOT 17,555', 17,523', 17,497', 17,468', 17,437', 17,410' - PRESS DROP TO 5437 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 13 - OWHP 5294 PSI - LEAD 2000 GAL 15% HCL - BREAK 7846 PSI @ 15 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 524,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,050 BBL AR=70.1 BPM AP=10,307 PSI - ISIP=6379 PSI - FG=0.94 - 5 MIN=5891 PSI

PERF STAGE 14 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 17,392' - PUH TO PERF SETTING TEST PLUG 7526 PSI - HELD - SHOOT 17,372', 17,350', 17,323', 17,294', 17,262', 17,236' - PRESS DROP TO 5503 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 14 - OWHP 5376 PSI - LEAD 2000 GAL 15% HCL - BREAK 7913 PSI @ 13 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 524,060# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,785 BBL AR=73.5 BPM AP=10,437 PSI - ISIP=6342 PSI - FG=0.93 - 5 MIN=5980 PSI

2/8/2017

PERF STAGE 15 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @ 17,220' - PUH TO PERF SETTING TEST PLUG 7527 PSI - HELD - SHOOT 17,202', 17,178', 17,149', 17,120', 17,091', 17,062' - PRESS DROP TO 5552 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 15 - TOTAL SAND PUMPED 525,490# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,749 BBL - AR=71.2 BPM - AP=10,502 PSI - ISIP=6609 PSI - FG=0.95 - 5 MIN=6040 PSI

2/9/2017

PERF STAGE 16 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @17,048' - PUH TO PERF SETTING TEST PLUG 7549 PSI - HELD - SHOOT 17,033', 17,004', 16,975', 16,946', 16,917', 16,884' - PRESS DROP TO 5562 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 16 - OWHP 5363 PSI - LEAD 2000 GAL 15% HCL - BREAK 8052 PSI @ 10.4 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 532,940# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,272 BBL AR=69.6 BPM AP=10,290 PSI - ISIP=6490 PSI - FG=0.95 - 5 MIN=6044 PSI

PERF STAGE 17 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,874' - PUH TO PERF SETTING TEST PLUG 7575 PSI - HELD - SHOOT 16,859', 16,830', 16,801', 16,772', 16,743', 16,714' - PRESS DROP TO 5523 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 17 - OWHP 5413 PSI - LEAD 2000 GAL 15% HCL - BREAK 7611 PSI @ 14.6 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 519,660# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,782 BBL AR=71.1 BPM AP=10,387 PSI - ISIP=6397 PSI - FG=0.94 - 5 MIN=5925 PSI

PERF STAGE 18 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,700' - PUH TO PERF DEPTH. TEST PLUG 7567 PSI - HELD - SHOOT 16,682', 16,656', 16,627', 16,598', 16,569', 16,540' - PRESS DROP TO 5496 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 18 - OWHP 5401 PSI - LEAD 2000 GAL 15% HCL - BREAK 7521 PSI @ 6.2 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 522,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,724 BBL AR=72.8 BPM AP=10,329 PSI - ISIP=6394 PSI - FG=0.94 - 5 MIN=5947 PSI

PERF STAGE 19 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,526' - PUH TO PERF SETTING TEST PLUG 7703 PSI - HELD - SHOOT 16,511', 16,482', 16,453', 16,424', 16,395', 16,366' - PRESS DROP TO 5780 PSI - POOH. ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL.

2/10/2017

FRAC STAGE 19 - OWHP 5380 PSI - LEAD 2000 GAL 15% HCL - BREAK 9803 PSI @ 11.1 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 528,760# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,918 BBL - AR=73.9 BPM AP=10,449 PSI - ISIP=6624 PSI - FG=0.96 - 5 MIN=5982 PSI

PERF STAGE 20 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,352' - PUH TO PERF SETTING. TEST PLUG 7525 PSI - HELD - SHOOT 16,337', 16,308', 16,279', 16,250', 16,221', 16,192' - PRESS DROP TO 5543 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 20 - OWHP 5404 PSI - LEAD 2000 GAL 15% HCL - BREAK 8437 PSI @ 11.7 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 521,620# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=9,898 BBL AR=73.6 BPM AP=10,467 PSI - ISIP=6436 PSI - FG=0.94 - 5 MIN=5962 PSI

PERF STAGE 21 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,173' - PUH TO PERF SETTING TEST PLUG 7549 PSI - HELD - SHOOT 16,154', 16,134', 16,105', 16,076', 16,047', 16,018' - PRESS DROP TO 5478 PSI - POOH. ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 21 - OWHP 5335 PSI - LEAD 2000 GAL 15% HCL - BREAK 9048 PSI @ 14.6 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 519,960# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,474 BBL AR=75.8 BPM AP=10,413 PSI - ISIP=6456 PSI - FG=0.94 - 5 MIN=5991 PSI

2/11/2017

PERF STAGE 22 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @16,004' - PUH TO PERF SETTING TEST PLUG 7564 PSI - HELD - SHOOT 15,986', 15,960', 15,931', 15,902', 15,873', 15,848' - PRESS DROP TO 5542 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 22 - OWHP 5442 PSI - LEAD 2000 GAL 15% HCL - BREAK 8523 PSI @ 11.2 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 549,240# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,105 BBL AR=73.8 BPM AP=10,483 PSI - ISIP=6558 PSI - FG=0.95 - 5 MIN=5886 PSI

PERF STAGE 23 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,830' - PUH TO PERF SETTING TEST PLUG 7570 PSI - HELD - SHOOT 15,815', 15,786', 15,759', 15,728', 15,699', 15,674' - PRESS DROP TO 5549 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 23 - OWHP 5403 PSI - LEAD 2000 GAL 15% HCL - BREAK 8461 PSI @ 11.4 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 544,120# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,736 BBL AR=71.5 BPM AP=10,489 PSI - ISIP=6401 PSI - FG=0.94 - 5 MIN=5882 PSI

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PERF STAGE 24 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,656' - PUH TO PERF SETTING TEST PLUG 7588 PSI - HELD - SHOOT 15,641', 15,612', 15,582', 15,554', 15,525', 15,496' - PRESS DROP TO 5393 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 24 - OWHP 5311 PSI - LEAD 2000 GAL 15% HCL - BREAK 8876 PSI @ 11.2 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 540,480# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,762 BBL AR=75.8 BPM AP=10,436 PSI - ISIP=6668 PSI - FG=0.96 - 5 MIN=6000 PSI

PERF STAGE 25 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,482' - PUH TO PERF SETTING - PERFORATED 15,362', 15,344', 15,326', 15,309', 15,291', 15,274' PRESS DROP TO 5880 PSI - POOH - ALL SHOTS FIRED - SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SET - 72 TOTAL

FRAC STAGE 25 - OWHP 5427 PSI - LEAD 2000 GAL 15% HCL - BREAK 8929 PSI @ 14.6 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 552,270# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,442 BBL AR=78.9 BPM AP=10,448 PSI - ISIP=6475 PSI - FG=0.95 - 5 MIN=6007 PSI.

PERF STAGE 26 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,260' - PUH TO PERF SETTING TEST PLUG 7636 PSI - HELD - SHOOT 15,240', 15,226', 15,210', 15,188', 15,169', 15,148' - PRESS DROP TO 5561 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 26 - OWHP 5450 PSI - LEAD 2000 GAL 15% HCL - BREAK 7350 PSI @ 15.1 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 539,520# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,528 BBL AR=80.4 BPM AP=10,432 PSI - ISIP=6530 PSI - FG=0.95 - 5 MIN=5974 PSI

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PERF STAGE 27 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @15,134' - PUH TO PERF SETTING TEST PLUG 7592 PSI - HELD - SHOOT 15,114', 15,090', 15,061', 15,026', 15,003', 14,974' - PRESS DROP TO 5432 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 27 - OWHP 5383 PSI - LEAD 2000 GAL 15% HCL - BREAK 8430 PSI @ 12.8 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 547,020# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,411 BBL AR=76.2 BPM AP=10,458 PSI - ISIP=6532 PSI - FG=0.95 - 5 MIN=5962 PSI

PERF STAGE 28 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @14,960' - PUH TO PERF SETTING TEST PLUG 7995 PSI - HELD - SHOOT 14,942', 14,916', 14,887', 14,858', 14,829', 14,800' - PRESS DROP TO 5473 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 28 - OWHP 5366 PSI - LEAD 2000 GAL 15% HCL - BREAK 8009 PSI @ 13 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 540,780# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,288 BBL AR=79.1 BPM AP=10,258 PSI - ISIP=6551 PSI - FG=0.95 - 5 MIN=6026 PSI

PERF STAGE 29 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @14,786' - PUH TO PERF SETTING TEST PLUG 7587 PSI - HELD - SHOOT 14,776', 14,742', 14,713', 14,684', 14,655', 14,626' - PRESS DROP TO 5504 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

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FRAC STAGE 29 - OWHP 5312 PSI - LEAD 2000 GAL 15% HCL - BREAK 6895 PSI @ 14.6 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# TOTAL SAND PUMPED 551,660# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=12,050 BBL AR=80.4 BPM AP=10,248 PSI - ISIP=6525 PSI - FG=0.95 - 5 MIN=6021 PSI

PERF STAGE 30 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @14,595' - PUH TO PERF SETTING. TEST PLUG 7693 PSI - HELD - SHOOT 14,572', 14,548', 14,524', 14,500', 14,480', 14,452' - PRESS DROP TO 5691 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 30 - OWHP 5325 PSI - LEAD 2000 GAL 15% HCL - BREAK 8473 PSI @ 13.3 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# TOTAL SAND PUMPED 552,290# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,837 BBL - AR=79.5 BPM - AP=10,357 PSI - ISIP=5630 PSI - FG=0.95 - 5 MIN=5955 PSI

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PERF STAGE 31 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @14,438' - PUH TO PERF SETTING DEPTH TEST PLUG 7580 PSI - HELD - SHOOT 14,423', 14,396', 14,365', 14,336', 14,310', 14,278' - PRESS DROP TO 5486 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 31 - OWHP 5360 PSI - LEAD 2000 GAL 15% HCL - BREAK 7749 PSI @ 10.4 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 558,080# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,435 BBL AR=79.9 BPM AP=10,220 PSI - ISIP=6399 PSI - FG=0.94 - 5 MIN=5884 PSI

PERF STAGE 32 - PUMP DOWN SPOTTING 1500 GAL 15% HCl - SET PLUG @14,265' - PUH TO PERF SETTING DEPTH. TEST PLUG 8023 PSI - HELD - SHOOT 14,249', 14,218', 14,191', 14,162', 14,133', 14,104' - PRESS DROP TO 5491 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 32 - OWHP 5424 PSI - LEAD 2000 GAL 15% HCL - BREAK 7480 PSI @ 8.4 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# - AT 1 PPG @ SHIFT CHANGE. COMPLETE STG 32 FRAC - TOTAL SAND PUMPED 552,460# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=11,894 BBL - AR=80.3 BPM - AP=10,252 PSI - ISIP=6343 PSI - FG=0.93 - 5 MIN=5954 PSI

PERF STAGE 33 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @14,095' - PUH TO PERF SETTING TEST PLUG 7635 PSI - HELD - SHOOT 14,070', 14,046', 14,017', 13,988', 13,959', 13,930' - PRESS DROP TO 5469 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 33 - OWHP 5482 PSI WELLSIDE & 5550 PSI PUMP SIDE - LEAD 2000 GAL 15% HCL ACID - PUMP PAD - HAD RATE UP TO 80 BPM - PUMPED NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMP 555,760# - FLUSHED WITH 7 VIS LINEAR GEL - LLTR=12,997 BBL - AR=80.5 BPM - AP=9939 PSI - ISIP=6467 PSI - FG=0.94 - 5 MIN=5831 PSI

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PERF STAGE 34 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @13,912' - PUH TO PERF SETTING TEST PLUG 7625 PSI - HELD - SHOOT 13,893', 13,872', 13,843', 13,814', 13,785', 13,756' - PRESS DROP TO 5385 PSI - POOH ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 34 - OWHP 5325 PSI - LEAD 2000 GAL 15% HCL - BREAK 7726 PSI @ 11.2 BPM - PUMP NON SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 1.6# - TOTAL SAND PUMPED 466,840# - FLUSH WITH 7 VIS LINEAR GEL - LLTR=10,581 BBL - AR=79.8 BPM AP=9,918 PSI - ISIP=6340 PSI - FG=0.94 - 5 MIN=5853 PSI

PERF STAGE 35 - PUMP DOWN SPOTTING 1500 GAL 15% HCL - SET PLUG @13,742' - PUH TO PERF SETTING TEST PLUG 7540 PSI - HELD - SHOOT 13,727', 13,698', 13,669', 13,640', 13,611', 13,582' - PRESS DROP TO 5391 PSI - POOH. ALL SHOTS FIRED - ALL SHOTS 0.42" EHD, 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 35 - OWHP 5308 PSI - LEAD 2000 GAL 15% HCL - BREAK 6896 PSI @ 11.2 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# PPG - TOTAL SAND PUMPED 574,820# - FLUSH WITH 7 VIS LINEAR GEL LLTR =12,037 - AR=80.5 BPM AP=9,835 PSI - ISIP=6427 PSI - FG=0.94 - 5 MIN=5944 PSI

PERF STAGE 36 - PUMP DOWN WITH 62 BBLS - SET PLUG @13,553' - PUH TO PERF SETTING SHOOT 13,539', 13,513', 13,487', 13,461', 13,435', 13,408' - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

FRAC STAGE 36 - OWHP 5358 - BALL DROPPED - PUMPED 20 BBL SPACER - 1500 GAL 15% HCL - 100 BBLS SPACER 2000 GAL 15% HCL & FOLLOWED/SLICK WATER - SAW BALL HIT AFTER TOTAL OF 224 BBLS PUMPED BREAK 8621 PSI AT 12 BPM - PUMP NON-SPEC 100 MESH IN FR RAMPING FROM 0.5# TO 2# - TOTAL SAND PUMPED 577,720# - FLUSHED WITH 7 VIS LINEAR GEL - LLTR=12,201 BBL - AR=80.7 BPM - AP =9833 PSI - ISIP=6400 PSI - FG=0.94 - 5 MIN=5920 PSI

PERF STAGE 37 - PUMP DOWN WITH 182 BBLS - SET PLUG @13,394' - PUH TO PERF SETTING SHOOT 13,379', 13,350', 13,321', 13,292', 13,263', 13,234' - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOTS PER SETTING, 72 SHOTS TOTAL

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FRAC STAGE 37 - OWHP 5388 PSI - DROP BALL - LEAD 3500 GAL 15% HCL - BALL HIT W/ 218 BBL - BREAK 8150 PSI 15.6 BPM - PUMP NON- SPEC 100 MESH IN SLICK WATER RAMPING 0.5# TO 2# - 577,940#

SAND PUMPED - FLUSH W/ LINEAR GEL - LLTR=11,860 BBL - AR=78.6 BPM - AP=10,217 PSI - ISIP=6399 PSI - FG=.94 - 5 MIN=5818 PSI

PERF STAGE 38 - PUMP DOWN WITH 59 BBLS - SET PLUG @13,220' - PUH TO PERF SETTING SHOOT 13,539', 13,513', 13,487', 13,461', 13,435', 13,408' - POOH - ALL SHOTS FIRED - ALL SHOTS 0.42", 60* PH, 6 SPF, 12 SHOT PER SET, 72 TOTAL

FRAC STAGE 38 - OWHP 5400 PSI - DROP BALL - LEAD 3500 GAL 15% HCL - BALL HIT W/ 212 BBL - BREAK 7248 PSI 11.7 BPM - PUMP NON- SPEC 100 MESH IN SLICK WATER RAMPING 0.5# TO 2# - 541,160#
SAND PUMPED - FLUSH W/ LINEAR GEL - LLTR=11,059 BBL - AR=80.1 BPM - AP=9,916 PSI - ISIP=6201 PSI - FG=.92 - 5 MIN=5753 PSI

TOTAL FLUID TO RECOVER 464,638 BBL - TOTAL SAND PUMPED 19,743,950#